

BIOCHEMICAL AND BIOPHYSICAL

Research Communications

EDITORS:

Francois Gros

I. C. Gunsalus

B. L. Horecker

Boris Magasanik

William D. McElroy

Frederick C. Neidhardt

Elizabeth F. Neufeld

William D. Phillips

George K. Radda

Esmond E. Snell

Volume 100 • 1981



ACADEMIC PRESS

A Subsidiary of Harcourt Brace Jovanovich, Publishers

New York London Toronto Sydney San Francisco Tokyo

Copyright © 1981 by Academic Press, Inc.

ALL RIGHTS RESERVED

No part of this publication may be reproduced or transmitted in any form, or by any means, electronic or mechanical, including photocopy, recording, or any information storage and retrieval system, without permission in writing from the copyright owner.

The appearance of the code at the bottom of the first page of an article in this journal indicates the copyright owner's consent that copies of the article may be made for personal or internal use, or for the personal or internal use of specific clients. This consent is given on the condition, however, that the copier pay the stated per copy fee through the Copyright Clearance Center, Inc. (21 Congress Street, Salem, Massachusetts 01970), for copying beyond that permitted by Sections 107 or 108 of the U.S. Copyright Law. This consent does not extend to other kinds of copying, such as copying for general distribution, for advertising or promotional purposes, for creating new collective works, or for resale. Copy fees for pre-1981 articles are the same as those shown for current articles.

MADE IN THE UNITED STATES OF AMERICA

BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS

CONTENTS

Volume 100, Number 1, May 15, 1981

AUTHOR INDEX, Volume 100, Number 1, May 15, 1981	ii
DAVID A. BASS, MICHAEL J. THOMAS, EDWARD J. GOETZL, LAWRENCE R. DECHATELET, and CHARLES E. MCCALL. Lipoygenase-Derived Products of Arachidonic Acid Mediate Stimulation of Hexose Uptake in Human Polymorphonuclear Leukocytes	1
PHILIP K. HALL, LYNN P. NELLES, JAMES TRAVIS, and RONALD C. ROBERTS. Proteolytic Cleavage Sites on α_2 -Macroglobulin Resulting in Proteinase Binding Are Different for Trypsin and <i>Staphylococcus aureus</i> V-8 Proteinase	8
CARLOS VICENTE and ISABEL GARCIA. Decrease in Phytochrome Pelletability Induced by Green + Far-Red Light in <i>Trifolium repens</i>	17
W. O. DAWSON and G. L. GRANTHAM. Inhibition of Stable RNA Synthesis and Production of a Novel RNA in Heat-Stressed Plants	23
K. KARIYA, H. OKAMOTO, M. KAKIMOTO, Y. TSUDA, and Y. OKADA. Inhibition of Angiotensin Converting Enzyme of Rat Brain with Bradykinin and Its Fragments	31
PAL L. VAGHY, MOHAMMED A. MATLIB, and ARNOLD SCHWARTZ. Phosphate-Induced Swelling, Inhibition, and Partial Uncoupling of Oxidative Phosphorylation in Heart Mitochondria in the Absence of External Calcium and in the Presence of EGTA	37
J. R. DAVE, R. A. KNAZEK, and S. C. LIU. Prolactin Modifies the Fluidity of Rat Liver Membranes	45
TAKAFUMI OHTA, MAKIKO ISA, YAYOI SUZUKI, NAOMI YAMAHATA, SHIZUO SUZUKI, and TSUTAO KURECHI. Formation of Mutagens from Tryptophan by the Reaction with Nitrite	52
L. J. TAKEMOTO, J. S. HANSEN, and L. E. HOKIN. Phosphorylation of Lens Membrane: Identification of the Catalytic Subunit of Na^+, K^+ -ATPase	58
CHISEKO NODA, TOSHIKAZU NAKAMURA, and AKIRA ICHIHARA. Hormonal Regulation of Serine Dehydratase Activity in Primary Cultures of Adult Rat Hepatocytes	65
P. C. SUPAKAR and M. S. KANUNGO. Chromatin Function in Developing Brain: Acetylation of Chromosomal Proteins and RNA Synthesis	73
Z. DEYL, O. VANCIKOVA and K. MACEK. The Effect of Oxytetracycline and Some Related Antibiotics upon the γ -Carboxyglutamic Acid Level in Bone and Kidney Cortex	79
JEFFERY W. WALKER, MARK G. MCNAMEE, ELENA PASQUALE, DEREK J. CASH, and GEORGE P. HESS. Acetylcholine Receptor Inactivation in <i>Torpedo californica</i> Electroplex Membrane Vesicles. Detection of Two Processes in the Millisecond and Second Time Regions	86
KUNIKO MURAKAMI and KYUICHIRO OKUDA. Partial Purification and Characterization of Steroid 12 α -Monooxygenase	91
JOEL K. KAHN and K. M. J. MENON. Evidence that Arginine Vasotocin Inhibits Human Chorionic Gonadotropin and Cyclic Adenosine 3',5'-Monophosphate Stimulated Ovarian Steroidogenesis	100
IRENA EKIEL, DEREK MARSH, BARRY W. SMALLBONE, MORRIS KATES, and IAN C. P. SMITH. The State of Lipids in the Purple Membrane of <i>Halobacterium cutirubrum</i> as Seen by ^{31}P -NMR	105
WILLIAM DEW. HORROCKS, JR. and A. PETER SNYDER. Measurement of Distance between Fluorescent Amino Acid Residues and Metal Ion Binding Sites. Quantitation of Energy Transfer between Tryptophan and Terbium(III) or Europium(III) in Thermolysin	111
B. N. SLOSBERG and R. C. MONTELARO. Phase Transitions Identified in the Lipid Envelope of Friend Murine Leukemia Virus	118
P. VIGLINO, A. RIGO, E. ARGESI, L. CALABRESE, D. COCCO, and G. ROTILIO. ^{19}F Relaxation as a Probe of the Oxidation of Cu,Zn Superoxide Dismutase. Studies of the Enzyme in Steady-State Turnover	125
FUMIO NOMURA and CHARLES S. LIEBER. Binding of Acetaldehyde to Rat Liver Microsomes: Enhancement after Chronic Alcohol Consumption	131
W. DARYL DICKEY, H. BETH RUDLOFF, ARMOND S. GOLDMAN, and FRANK C. SCHMALSTIEG. Human Uropod Bearing Lymphocytes: Isolation of a Factor from Human Milk that Abrogates the Uropod Inhibitory Protein from Human Serum	138
JAAKKO R. BROTHERRUS, JESPER V. MØLLER, and PETER L. JØRGENSEN. Soluble and Active Renal Na, K -ATPase with Maximum Protein Molecular Mass $170,000 \pm 9000$ Daltons: Formation of Larger Units by Secondary Aggregation	146
ANTHONY G. DILELLA, JOHN Y. L. CHIANG, and ALAN W. STEGGLES. The Partial Purification of Rabbit Liver Cytochrome $P-450\text{-LM}_2$ -mRNA	155
WALTER K. K. HO and W. S. NG. The Acyl Chain Requirement of Phosphatidylcholine in the Inhibition of Concanavlin A-Stimulated Blastogenesis	162
T. RAMASSARMA, BARBARA PATON, and S. GOLDFARB. Inactivation of 3-Hydroxy-3-methylglutaryl CoA Reductase by Fe^{2+} and a Cytosolic Protein	170
TAKASHI ABIKO, IKUKO ONODERA, and HIROSHI SEKINO. Synthesis of Six Analogues and Their Two Fragments Related to L- α -Hydroxyisovaleryl-Leu-Val-Phe-OME as Renin Inhibitor	177
ROBERT R. GORMAN, KIRK M. MAXEY, and GORDON L. BUNDY. Inhibition of Human Platelet Thromboxane Synthetase by 11 α -Carbathromboxane A_2 Analogs	184

EUGENE A. PERMYAKOV, VLADIMIR V. YARMOLENKO, LINA P. KALINICHENKO, LUDMILA A. MOROZOVA, and EDWARD A. BURSTEIN. Calcium Binding to α -Lactalbumin: Structural Rearrangement and Association Constant Evaluation by Means of Intrinsic Protein Fluorescence Changes	191
WALTER STENDER. Inhibition of <i>E. coli</i> RNA Polymerase by Fab Fragments from Subunit-Specific Antibodies	198
TIN-CHUEN YEUNG and ANTHONY S. GIDARI. Effects of Porphyrinogenic (Porphyrin-Producing) Agents on Avian Embryonic Hepatic Glutathione <i>S</i> -Transferase Activity	205
MOO-YEEN WEST, DAVID SINCLAIR, and PETER SOUTHWELL-KEELY. On the Stoichiometry of Oxygen Metabolism in Polymorphonuclear Leukocytes	212
HIROSHI KANAZAWA, KAZUNORI MABUCHI, TOSHIAKI KAYANO, FUMIE TAMURA, and MASAMITSU FUTAI. Nucleotide Sequence of Genes Coding for Dicyclohexylcarbamide-Binding Protein and the α Subunit of Proton-Translocating ATPase of <i>Escherichia coli</i>	219
KATSUKO YAMASHITA, TAKASHI OHKURA, HIDEO YOSHIMA, and AKIRA KOBATA. Substrate Specificity of Diplococcal β - <i>N</i> -Acetylhexosaminidase, A Useful Enzyme for the Structural Studies of Complex-Type Asparagine-Linked Sugar Chains	226
KARL TRYGGVASON, JOUKO OIKARINEN, LASSE VIINIKKA, and OLAVI YLIKORKALA. Effects of Laminin, Proteoglycan and Type IV Collagen, Components of Basement Membranes, on Platelet Aggregation	233
JACK R. LANCASTER, JR. Membrane-Bound Flavin Adenine Dinucleotide in <i>Methanobacterium bryantii</i>	240
DAVID L. SEVERSON, SHELLIE K. SLOAN, and ALBERT KRYSKI, JR. Acid and Neutral Triacylglycerol Ester Hydrolases in Rat Heart	247
MAX FEHLMANN, BERTRAND CANIVET, and PIERRE FREYCHET. Epidermal Growth Factor Stimulates Monovalent Cation Transport in Isolated Rat Hepatocytes	254
MASAHARU KUBO, YUJI MATSUZAWA, SHOJI TAJIMA, KATSUNORI ISHIKAWA, AKIRA YAMAMOTO, and SEIICHIRO TARUI. APO A-I and APO A-II Inhibit Hepatic Triglyceride Lipase from Human Postheparin Plasma	261
MICHEL SATRE. The Effect of Asterolxin and Citreomontanine, Two Polyenic α -Pyrone Mycotoxins, on <i>Escherichia coli</i> Adenosine Triphosphatase	267
BARBARA D. SMITH and CYNTHIA K. SILBERT. Fibronectin and Collagen of Cultured Skin Fibroblasts in Diabetes Mellitus	275
ALLEN B. RAWITCH and REI-YU HWAN. Thyroglobulin Structure-Function: Anilino-naphthalene Sulfonate Binding and the Definition of Nonpolar Sites on Native Bovine Thyroglobulin	283
ALAN J. HIGGINS, MALCOLM MORVILLE, ROGER A. BURGESS, and KENNETH J. BLACKBURN. Mechanism of Action of Oxfenicine on Muscle Metabolism	291
SIRPA O. KARENLAMPI and PAAVO H. HYNINEN. Second-Derivative Spectroscopic Assay of Cytochrome <i>P</i> -450 of Yeast Cells. Resolution of Cytochrome a_1	297
ANNIE VAN BROEKHOVEN, MARIE-CHRISTINE PEETERS, LUC J. DEBEER, and GUY P. MANNAERTS. Subcellular Distribution of Coenzyme A: Evidence for a Separate Coenzyme A Pool in Peroxisomes	305
HUI YUN CHANG and GEORGE KUNOS. Short-Term Effects of Triiodothyronine on Rat Heart Adrenoceptors	313
KAZUO OHKI, TAEKO YAMAUCHI, YOSHIKO BANNO, and YOSHINORI NOZAWA. A Possible Role of Stimulus-Enhanced Phosphatidylinositol Turnover: Calcium-Sparring Effect of Diacylglycerol in Inducing Phase Separation of Phosphatidylcholine/Phosphatidylserine Mixtures	321
MARTIN F. LAVIN. Effect of Novobiocin on DNA Synthesis and Structure in Human Lymphoblastoid Cells	328
C. A. BROWNE, H. P. J. BENNETT, and S. SOLOMON. The Isolation and Characterization of γ , γ -Melanotropin from the Neurointermediary Lobe of the Rat Pituitary	336
WEN-GANG CHOU and BURTON M. POGELL. Pamamycin Inhibits Nucleoside and Inorganic Phosphate Transport in <i>Staphylococcus aureus</i>	344
WILLIAM P. TONG, MARION C. KIRK, and DAVID B. LUDLUM. Molecular Pharmacology of the Haloethyl Nitrosoureas: Formation of 6-Hydroxyethylguanine in DNA Treated with BCNU (<i>N,N'</i> -Bis[2-chloroethyl]- <i>N</i> -nitrosourea)	351
AMOS LANIR and HAGGAI GILBOA. Proton Magnetic Relaxation in Intact Mice Lungs during Oxygen Exposure	358
DAVID L. ASHLEY and J. H. GOLDSTEIN. Nuclear Magnetic Resonance Evidence for Abnormal Water Transport in Duchenne Muscular Dystrophy Erythrocytes	364
PAUL B. FISHER, URI COGAN, ANN D. HOROWITZ, DAVID SCHACHTER, and I. BERNARD WEINSTEIN. TPA Resistance in Friend Erythroleukemia Cells: Role of Membrane Lipid Fluidity	370
J. A. FEE, G. J. MCCLUNE, P. O'NEILL, and E. M. FIELDEN. Saturation Behavior of Superoxide Dismutation Catalyzed by the Iron-Containing Superoxide Dismutase of <i>E. coli</i> B	377
FRANCOIS BOUCHER and ROGER M. LEBLANC. Photoacoustic Spectroscopy of Cattle Visual Pigment at Low Temperature	385
ALEX V. NICHOLS, ELAINE L. GONG, and PATRICIA J. BLANCHE. Interconversion of High-Density Lipoproteins during Incubation of Human Plasma	391
GEORGES DREYFUS, A. GOMEZ-PUYOU, and M. TUENA DE GOMEZ-PUYOU. Electrochemical Gradient Induced Displacement of the Natural ATPase Inhibitor Protein from Mitochondrial ATPase as Detected by Antibodies against the Inhibitor Protein	400
KEN-ICHI TSUTSUMI and KIICHI ISHIKAWA. Purification of Messenger RNA Coding for Rat Liver Aldolase B Subunit	407
LENNIE COCCO, CARROLL TEMPLE, JR., JOHN A. MONTGOMERY, ROBERT E. LONDON, and RAYMOND L. BLAKLEY. Protonation of Methotrexate Bound to the Catalytic Site of Dihydrofolate Reductase from <i>Lactobacillus casei</i>	413
JOHN H. PAZUR, KEITH R. FORRY, YOSHIO TOMINAGA, and ELLEN M. BALL. Antigliucosyl Antibodies: Antibodies Directed against the Carbohydrate Moieties of a Glycoprotein	420

TAKEHIKO WATANABE, YOSHITAKA TAGUCHI, KAZUYUKI SASAKI, KENICHIRO TSUYAMA, and YUKIHIKO KITAMURA. Increase in Histidine Decarboxylase Activity in Mouse Skin after Application of the Tumor Promotor Tetradecanoylphorbol Acetate	427
PHILLIP DICKER and ENRIQUE ROZENGURT. Phorbol Ester Stimulation of Na Influx and Na-K Pump Activity in Swiss 3T3 Cells	433
KENJI HONDA, YUKI MAEDA, SHIGERU SASAKAWA, HIROYUKI OHNO, and EISHUN TSUCHIDA. Activities of Cell Fusion and Lysis of the Hybrid Type of Chemical Fusogens. I. Structure and Function of the Promotor of Cell Fusion	442
LORENZO A. PINNA, FLAVIO MEGGIO, and MARINA M. DEDIUKINA. Phosphorylation of Troponin T by Casein Kinase TS	449
JEFFREY CARLSON and ESTHER BRESLOW. Contribution of the Peptide Backbone to the Binding of Peptides and Hormones to Neurophysin	455
MASANAO MIWA, MIEKO KANAI, TOMOKO KONDO, HIRO-O HOSHINO, KAZUYUKI ISHIHARA, and TAKASHI SUGIMURA. Inhibitors of Poly(ADP-ribose) Polymerase Enhance Unscheduled DNA Synthesis in Human Peripheral Lymphocytes	463
SOREL SULIMOVICI, MARTIN S. ROGINSKY, and FRANK SUSSER. Nephrogenous Cyclic AMP in Streptozotocin-Induced Diabetic Rat	471
MASAAHIKO MATSUMOTO, MICHIO TSUDA, TAKASHI KUSUMI, SHIGEO TAKADA, TADAKATSU SHIMAMURA, and TSUNEHICO KATSUNUMA. Enhancement by α -I-Antichymotrypsin of Antibody Response <i>in Vivo</i>	478
K. K. KOHLI, P. LINKO, and J. A. GOLDSTEIN. Multiple Forms of Solubilized and Partially Resolved Cytochrome P-450 from Rats Induced by 2,3,5,2',3',5'- and 3,4,5,3',4',5'-Hexachlorobiphenyls	483
ERRATA. Volume 97, Number 2, November 28, 1980: Shohei Maekawa and Teruo Abe, "Isolation of a New Calmodulin-Binding Protein from Rat Brain," pp. 621-627	491
Volume 97, Number 2, November 28, 1980: Karl Folkers, Naoki Sakura, Teresa Kubiak, and Henryk Stepień, "Isolation of Thymone A from Bovine Thymus: Partial Chemical and Biological Characterization," pp. 595-600	491
Volume 97, Number 3, December 16, 1980: A. Christie King, Robert A. Willis, and Pedro Cuatrecasas, "Accumulation of Epidermal Growth Factor within Cells Does Not Depend On Receptor Recycling," pp. 840-845	492

Volume 100, Number 2, May 29, 1981

AUTHOR INDEX, Volume 101, Number 2, May 29, 1981	ii
DIANA MARK MALCHOFF and DAVID E. BRUNS. Dissociation of Insulin's Effects on Cell Metabolism and on Subcellular Calcium Transport Systems of 3T3-L1 Adipocytes	501
PONNAL NAMBI and RAMESHWAR K. SHARMA. Demonstration of ACTH-Sensitive Particulate Guanylate Cyclase in Adrenocortical Carcinoma	508
BEN H. LEICHTLING, EVA SPITZ, and H. V. RICKENBERG. A cAMP-Binding Protein from <i>Dictyostelium discoideum</i> Regulates Mammalian Protein Kinase	515
ADOLPH J. FERRO, ARTHUR A. VANDENBARK, and MARGARET R. MACDONALD. Inactivation of S-Adenosylhomocysteine Hydrolase by 5'-Deoxy-5'-methylthioadenosine	523
I. B. C. MATHESON and JOHN LEE. An Efficient Bacterial Bioluminescence with Reduced Lumichrome	532
HARRIET S. TENENHOUSE, DIANE K. FAST, CHARLES R. SCRIVER, and MAGDOLNA KOLTAY. Intestinal Transport of Phosphate Anion Is Not Impaired in the <i>Hyp</i> (Hypophosphatemic) Mouse	537
SABINE SCHORDERET-SLATKINE, JOELLE FINIDORI-LEPICARD, JACQUES HANOUNE, and ETIENNE-EMILE BAULIEU. Effect of a Methyl-transferase Inhibitor, 5'-Deoxy-5'-S-isobutylthioadenosine (SIBA), on cAMP Level and Progesterone-Induced Meiosis Reinitiation in <i>Xenopus laevis</i> Oocytes	544
JURGEN MERKE and ANTHONY W. NORMAN. Studies on the Mode of Action of Calciferol. XXXII. Evidence for a 24(R),25(OH) ₂ -Vitamin D ₃ Receptor in the Parathyroid Gland of the Rachitic Chick	551
DAVID LAROCCA, DELORES HOMISAK, and WENDY CLOUGH. Synthesis of Hypomethylated Epstein-Barr Viral DNA Is Stimulated by Dimethylsulfoxide Treatment of Lymphoblastoid Cells	559
GEORGE F. KALF, ROBERT M. METRIONE, and THOMAS R. KOSZALKA. A Protein Stimulatory Factor for DNA Polymerase α in Rat Giant Trophoblast Cells	566
C. CHANDRA KUMAR and G. PADMANABAN. Evidence for the Involvement of a Rapidly Turning-Over Protease in the Degradation of Cytochrome Oxidase in <i>Neurospora crassa</i>	576
AGNES TURI, RENNE C. LU and PECK-SUN LIN. Effect of Heat on the Microtubule Disassembly and Its Relationship to Body Temperatures	584
KOHJI SHIRAI, ROGER L. BARNHART, and RICHARD L. JACKSON. Hydrolysis of Human Plasma High-Density Lipoprotein ₂ -Phospholipids and Triglycerides by Hepatic Lipase	591
MARIE-THERESE CHAUVET, JACQUELINE CHAUVET, and ROGER ACHER. Identification of Neurophysins: Complete Amino Acid Sequence of Horse VLDV-Neurophysin	600
BO ANGELIN, INGEMAR BJORKHEM, and KURT EINARSSON. Influence of Bile Acids on the Soluble Phosphatidic Acid Phosphatase in Rat Liver	606
F. PIROLLET, J. J. FEIGE, C. COCHET, D. JOB, and E. M. CHAMBAZ. Identification of a Specific Endogenous Inhibitor of a Casein Kinase (G Type) in Bovine Adrenal Cortex as a Glycosaminoglycan Mixture	613
YVES GIUDICELLI, NAGESWARA RAO THOTAKURA, DANIELE LACASA, RENE PECQUERY, and BRIGITTE AGLI. Direct Binding Studies Do Not Support the Existence of True α -Adrenoreceptors in Rat White Fat Cells	621
INGER GRUNNET and JENS KNUDSEN. Direct Transfer of Fatty Acids Synthesized <i>de novo</i> from Fatty Acid Synthetase into Triacylglycerols without Activation	629

SU-CHEN TSAI, RONALD ADAMIK, VINCENT C. MANGANIELLO, and MARTHA VAUGHAN. Reversible Inactivation of Soluble Liver Guanylate Cyclase by Disulfides	637
MAX HERZBERG, VIVIANE BIBOR-HARDY, and RENE SIMARD. Herpes-Specific and α DNA Polymerase in Nuclear Envelope of BHK Infected Cells	644
PAUL HUSBY, KAILA SINGH SRAI, BRIAN KETTERER, and INGE ROMSLO. Effect of Ligandin on the Efflux of Co-Deuteroporphyrin from Isolated Rat Liver Mitochondria	651
THERESE MONTENAY-GARESTIER, INES ARAGON, MARIE-AUDE DEVYNCK, PHILIPPE MEYER, and CLAUDE HELENE. Evidence for Structural Changes in Erythrocyte Membranes of Spontaneously Hypertensive Rats. A Fluorescence Polarization Study	660
CHRISTOPH GIERSCHE. Stimulation of Photophosphorylation by Low Concentrations of Uncoupling Amines	666
ZOE N. CANELLAKIS, LESLIE A. LANDE, and PHILIP K. BONDY. Covalent Binding of Polyamines to Proteins in HTC Cells	675
HUSSEIN M. ZEIDAN. Purification and Characterization of Phosphofructokinase from <i>Rhodotorula glutinis</i>	681
PAOLO TORTORA, MARTINA BIRTEL, ANKE-GABRIELE LENZ, and HELMUT HOLZER. Glucose-Dependent Metabolic Interconversion of Fructose 1,6-Bisphosphatase in Yeast	688
JOACHIM VATER, THOMAS GAUDSUN, and JOHANN SALNIKOW. A Fluorimetric Differentiation of the Binding Sites of the D-Ribulose-1,5-bisphosphate Carboxylase/Oxygenase from Spinach for Pyridoxal 5'-Phosphate	696
NORBERT R. KATZ and MARGIT ICK. Induction of Acetyl-CoA Carboxylase in Primary Rat Hepatocyte Cultures by Glucose and Insulin	703
RAJENDRA K. SHARMA and JERRY H. WANG. Inhibition of Calmodulin-Activated Cyclic Nucleotide Phosphodiesterase by Triton X-100	710
T. H. CLAUD, J. SCHLUMPF, M. R. EL-MAGHRABI, M. McGRANE, and S. J. PILKIS. Glucagon Stimulation of Fructose 1,6-Bisphosphatase Phosphorylation in Rat Hepatocytes	716
BRIAN B. HOFFMAN, SUSAN YIM, BIE SHUNG TSAI, and ROBERT J. LEFKOWITZ. Preferential Uncoupling by Manganese of α -Adrenergic Receptor Mediated Inhibition of Adenylate Cyclase in Human Platelets	724
KURT RANDERATH, HARI P. AGRAWAL, and ERIKA RANDERATH. Tumor Mitochondrial Transfer RNAs: The Nucleotide Sequence of Mitochondrial tRNA ^{Leu} _{UAG} from Morris Hepatoma 5123D	732
G. JOSEPH, M. CAIZERGUES-FERRER, F. AMALRIC, and J. P. ZALTA. An Overall Analysis of Phosphorylated Histone Variants in CHO Cells	738
C. J. PARKER, JR., and R. A. HUDSON. Cobra Venom Cardiotoxins as Probes of Altered Membrane Structure in Dystrophic Skeletal Muscle	746
BERNHARD HORSTHEMKE, HERBERT KNISATSCHEK, JEAN RIVIER, JURGEN SANDOW, and KARL BAUER. Degradation of Luteinizing Hormone-Releasing Hormone and Analogs by Adenohypophyseal Peptidases	753
RICHARD L. KARPEL, VALERIE A. YRTTIMAA, and GORDHAN L. PATEL. A Helix-Destabilizing Protein Substrate Devoid of Heterocyclic Bases	760
CATHERINE DELARUE, ISABELLE PERROTEAU, FRANCOIS LEBOULENGER, PIERRE NETCHITAULO, PHILIPPE LEROUX, SYLVIE JEGOU, ALAIN BELANGER, MARIE-CHRISTINE TONON, and HUBERT VAUDRY. <i>In Vitro</i> Effect of Prostaglandins on Corticosterone and Aldosterone Production by Frog Interrenal Gland	769
AMALIA SLOMIANY, KOICHI KOJIMA, ZOFIA BANAS-GRUSZKA, and BRONISLAW L. SLOMIANY. Structure of a Novel Sulfated Sialoglycosphingolipid from Bovine Gastric Mucosa	778
DORIT DINUR, EVAN R. KANTROWITZ, and JOSEPH HAJDU. Reaction of Woodward's Reagent K with Pancreatic Porcine Phospholipase A ₂ : Modification of an Essential Carboxylate Residue	785
FRANCK BRYANT and LARS G. LJUNGDAHL. Characterization of an Alcohol Dehydrogenase from <i>Thermoanaerobacter ethanolicus</i> Active with Ethanol and Secondary Alcohols	793
O. M. DE OLIVEIRA FILGUEIRAS, J. M. DE WINTER, and H. VAN DEN BOSCH. Phosphatidylcholine Accessibility in Single Bilayer Vesicles Prepared from Rat Liver Microsomal Lipids Containing Proteolipids	800
TAKASHI YAMAUCHI and HITOSHI FUJISAWA. Tyrosine 3-Monooxygenase Is Phosphorylated by Ca ²⁺ -, Calmodulin-Dependent Protein Kinase, Followed by Activation by Activator Protein	807
JOSEPH A. TRUGLIA and ALFRED STRACHER. Purification and Characterization of a Calcium-Dependent Sulfhydryl Protease from Human Platelets	814
PAUL B. FISHER, R. ALLAN MUFSON, and I. BERNARD WEINSTEIN. Interferon Inhibits Melanogenesis in B-16 Mouse Melanoma Cells	823
JOHN GIOVANELLI, S. HARVEY MUDD, and ANNE H. DATKO. Recycling of Methionine Sulfur in a Higher Plant by Two Pathways Characterized by Either Loss or Retention of the 4-Carbon Moiety	831
C. Y. CHENG, B. BOETTCHER, and R. J. ROSE. Lack of Cytosol and Nuclear Estrogen Receptors in Human Spermatozoa	840
D. FERBUS, J. JUSTESEN, F. BESANCON, and M. N. THANG. The 2',5'-Oligoadenylate Synthetase Has a Multifunctional 2',5'-Nucleotidyl-transferase Activity	847
JAY M. McDONALD, HARRIHAR A. PERSHADSINGH, FREDERICK L. KIECHLE, and LEONARD JARETT. Parallel Stimulation in Adipocytes of the Plasma Membrane Ca ²⁺ -Transport/(Ca ²⁺ + Mg ²⁺)ATPase System and Mitochondrial Pyruvate Dehydrogenase by a Supernatant Factor Derived from Isolated Plasma Membranes	857
DONALD M. WALLACE, MICHAEL J. M. HITCHCOCK, SUSAN B. REBER, and SHELBY L. BERGER. Translation of Human Immune Interferon Messenger RNA in <i>Xenopus laevis</i> oocytes	865
LEE A. WITTERS. Insulin Stimulates the Phosphorylation of Acetyl-CoA Carboxylase	872
NAOTAKA HAMASAKI, ALICE M. WYRWICZ, HARRY J. LUBANSKY, and AKIRA OMACHI. A ³¹ P NMR Study of Phosphoenolpyruvate Transport across the Human Erythrocyte Membrane	879
Y. KANEKO, M. YATSUZUKA, Y. ENDO, and T. ODA. Activation of Human Lymphocytes by Tumor Promoter Teleocidin	888

FREDERICK C. NEIDHARDT and RUTH A. VANBOGELEN. Positive Regulatory Gene for Temperature-Controlled Proteins in <i>Escherichia coli</i>	894
N. G. SEIDAH, S. BENJANNET, and M. CHRETIEN. The Complete Sequence of a Novel Human Pituitary Glycopeptide Homologous to Pig Posterior Pituitary Glycopeptide	901
M. DELAYE, J. I. CLARK, and G. B. BENEDEK. Coexistence Curves for Phase Separation in the Calf Lens Cytoplasm	908

Volume 100, Number 3, June 16, 1981

AUTHOR INDEX, Volume 100, Number 3, June 16, 1981	ii
J. ERCHEGYI, D. H. COY, M. V. NEKOLA, E. J. COY, A. V. SCHALLY, I. MEZO, and I. TEPLAN. Luteinizing Hormone-Releasing Hormone Analogs with Increased Anti-ovulatory Activity	915
N. A. GRIGORYAN, R. M. NALBANDYAN, and H. CH. BUNIATIAN. An Extremely Acidic Copper-Containing Protein from Chromaffin Granules	921
ZOE NAKOS CANELLAKIS. Effects of Acetylated Polyamines on Ornithine Decarboxylase in Rat HTC Cells	929
ALAN M. JOHNSON, P. J. McDONALD, and S. H. NEOH. Molecular Weight Analysis of the Major Polypeptides and Glycopeptides of <i>Toxoplasma gondii</i>	934
SAMUEL S. TONG, YOICHIRO HIROKATA, MICHAEL A. TRUSH, EDWARD G. MIMNAUGH, ERIKA GINSBURG, MICHAEL C. LOWE, and THEODORE E. GRAM. Clara Cell Damage and Inhibition of Pulmonary Mixed-Function Oxidase Activity by Naphthalene	944
K. P. CHEPENIK and R. M. GREENE. Prostaglandin Synthesis by Primary Cultures of Mouse Embryo Palate Mesenchyme Cells	951
HARRY BLAIR, ARNOLD J. KAHN, JENNY SADOW, J. DAVID MALONE, and STEVEN L. TEITELBAUM. Disassociation of Lysosomal Enzyme Secretion and Macrophage-Mediated Bone Resorption	959
ERIC EISENSTADT, BARRY SHPIZNER, and AVRAM GOLD. Metabolism of Cyclopenta-(α)pyrene at the K-Region by Microsomes and a Reconstituted Cytochrome P-450 System from Rat Liver	965
KARL FOLKERS, SATOSHI SHIZUKUISHI, SHEREE L. SCUDDER, RICHARD WILLIS, KINZO TAKEMURA, and JOHN B. LONGENECKER. Biochemical Evidence for a Deficiency of Vitamin B ₆ in Subjects Reacting to Monosodium L-Glutamate by the Chinese Restaurant Syndrome	972
JACK B. SHUMATE and RATI M. CHOKSI. Cyanide-Insensitive Palmitate Oxidation in Skeletal Muscle	978
F. VYSKOCIL, J. TEISINGER, and HANA DLOUHA. The Disparity between Effects of Vanadate(V) and Vanadyl(IV) Ions on (Na ⁺ -K ⁺)-ATPase and K ⁺ -Phosphatase in Skeletal Muscle	982
O. OHARA, S. TAKAHASHI, T. OOI, and Y. FUJIYOSHI. Fixation of Skeletal Muscle Actin in F-State by Chemical Crosslinking with bis-Imidoesters	988
BOHDAN SKALSKI, HENRYK KORONIAK, and KRYSZTOF GOLANKIEWICZ. Unconventional Model of Polynucleotides. Cyclic Tetramer Derived from 1,3-Trimethylene Thymine. Physical and Photochemical Properties	995
TERRY A. PRY and JOHN W. PORTER. Control of Fatty Acid Synthetase mRNA Levels in Rat Liver by Insulin, Glucagon, and Dibutyl Cyclic AMP	1002
RAJINDER N. PURI and JOHN W. PORTER. Isolation of Thioesterase and Acyl Carrier Protein Activities Liberated by Elastase Digestion of Pigeon Liver Fatty Acid Synthetase	1010
D. E. GREEN and H. VANDE ZANDE. Mechanism of Uncoupling by Uncouplers of Oxidative Phosphorylation	1017
CATHY L. SELVIUS DeROO and CHARLES F. YOCUM. Cation-Induced Inhibitor-Resistant Photosystem II Reactions in Cyanobacterial Membranes	1025
H. BAUBICHON, C. GODINOT, A. DI PIETRO, and D. C. GAUTHERON. Competition between ADP and Nucleotide Analogues to Occupy Regulatory Site(s) Related to Hysteric Inhibition of Mitochondrial F ₁ -ATPase	1032
HOLLY E. RICHTER and PETER C. LOEWEN. Induction of Catalase in <i>Escherichia coli</i> by Ascorbic Acid Involves Hydrogen Peroxide	1039
DIETER WERNER, DIMITER HADJIOLOV, and BEATRICE NEUER. Protease Inducible Alkali Lability of DNA from Proliferating and Non-proliferating Cells	1047
R. A. SCHWENDENER, M. ASANGER, and H. G. WEDER. <i>n</i> -Alkyl-glucosides as Detergents for the Preparation of Highly Homogeneous Bilayer Liposomes of Variable Sizes (60–240 nm ϕ) Applying Defined Rates of Detergent Removal by Dialysis	1055
KENJI SOBUE, YOSHIHIKO MURAMOTO, MASATAKA FUJITA, and SHIRO KAKIUCHI. Calmodulin-Binding Protein of Erythrocyte Cytoskeleton	1063
JOHN R. SOKATCH. Isolation of Two Lipoamide Dehydrogenases from <i>Pseudomonas putida</i> Grown on Valine	1071
RICHARD N. ARMSTRONG, WAYNE LEVIN, DENE E. RYAN, PAUL E. THOMAS, HE DUCK MAH, and DONALD M. JERINA. Stereoselectivity of Rat Liver Cytochrome P-450 _c on Formation of Benzo[<i>a</i>]pyrene 4,5-oxide	1077
NILI FEUERSTEIN, JERRY A. BASH, JAMES N. WOODY, and PETER W. RAMWELL. Leukotriene C Stimulates Prostaglandin Release from Rat Peritoneal Macrophages	1085
ATSUSHI KOIDE and MASAYUKI YOSHIZAWA. Crystallization and Identification of a Binary Complex of an Elastase-I and a Carboxypeptidase A γ from Porcine Pancreas	1091
HIROSHI SHIRAKI, SHUZO MIYAMOTO, YOSHIHIRO MATSUDA, EITA MOMOSE, and HACHIRO NAKAGAWA. Possible Correlation between Binding of Muscle-Type AMP Deaminase to Myofibrils and Ammoniogenesis in Rat Skeletal Muscle on Electrical Stimulation	1099

HIDEAKI YAMADA, TORU NAGASAWA, HARUYUKI OHKISHI, BUNSEI KAWAKAMI, and YOSHIKI TANI. Synthesis of D-Cysteine from 3-Chloro-D-alanine and Hydrogen Sulfide by 3-Chloro-D-alanine Hydrogen Chloride-lyase (Deaminating) of <i>Pseudomonas putida</i>	1104
KEVIN L. NASH, JOHN Y. L. CHIANG, and ALAN W. STEGGLES. The Effect of β -Naphthoflavone on Rabbit Liver Protein Synthesis, and on the Induction of Cytochrome P-450 LM, mRNA	1111
WALTER G. HANSTEIN and REINHOLD KIEHL. Energy-Dependent Accumulation of the Uncoupler Picrate and Proton Flux in Submitochondrial Particles	1118
BALAZS SZALONTAI. Light-Induced Membrane Potential Changes in <i>Halobacterium halobium</i> Observed with High Time Resolution by Resonance Raman Spectroscopy	1126
THOMAS MICHEL, BRIAN B. HOFFMAN, ROBERT J. LEFKOWITZ, and MARC G. CARON. Different Sedimentation Properties of Agonist- and Antagonist-Labelled Platelet α_2 -Adrenergic Receptors	1131
RICHARD T. COUGHLIN, CHARLES R. CALDWELL, A. HAUG, and ESTELLE J. MCGROARTY. A Cationic Electron Spin Resonance Probe Used to Analyze Cation Interactions with Lipopolysaccharide	1137
LYNN ELAM and CAROL A. BARNETT. Glucocorticoid Induction of Tyrosine Aminotransferase in Kidney Cortex	1143
BYRON H. ARISON, RALPH HIRSCHMANN, WILLIAM J. PALEVEDA, STEPHEN F. BRADY, and DANIEL F. VEBER. On the Low-Energy Solution Conformation of Somatostatin	1148
A. F. S. A. HABEEB. Controlled Coupling of Mildly Reduced Proteins to Sepharose Gelatin by Heterobifunctional Reagent	1154
J. ARNAUD, O. NOBILI, and J. BOYER. Effect of Adrenocorticotrophic Hormone on the Activity of Sterol Ester Hydrolase from Rat Brain	1167
FRANCOIS AUDUBERT and MARIANNE SEMMEL. Comparison of Lipophilic Proteins in Murine and Avian Oncornaviruses	1173
CAROLYN E. MOUNTFORD, G. GROSSMAN, KERRY T. HOLMES, A. W. HAMPSON, and G. H. REID. Interaction of Influenza Virus with Chicken Fibroblasts: A Proton Magnetic Resonance Study	1183
SHUN-ICHIRO KUBOTA, KOICHI SUZUKI, and KAZUTOMO IMAHORI. A New Method for the Preparation of a Calcium-Activated Neutral Protease Highly Sensitive to Calcium Ions	1189
JUDITH AGGELER, EVA ENGVALL, and ZENA WERB. An Irreversible Tissue Inhibitor of Collagenase in Human Amniotic Fluid: Characterization and Separation from Fibronectin	1195
KATARINA LUCIAKOVA and STEFAN KUZELA. Response of Mitochondrial ATPase Activity to Uncouplers in Isolated Organelles and Whole Cells of Zajdela Hepatoma	1202
TERRI L. STAHL and CARL Wm. VERMEULEN. Isopycnic Analysis of Intact Cells. IV. Comparison of Anaerobic Shift-Down with Autonomous Phage Shut-Down in <i>Escherichia coli</i>	1209
ALAIN LE PAPE, JEAN-DOMINIQUE GUITTON, and JEAN-PIERRE MUH. Modifications of Glomerular Basement Membrane Crosslinks in Experimental Diabetic Rats	1214
C. RAMPINI and C. DUBOIS. Changes in Phospholipid Metabolism of SV3T3 Transformed Fibroblasts Restricted by Plating and Cultivation at Low Serum Concentration and Subsequently Restimulated by Serum	1222
LINDA M. KEEFER, MARIE-AGNES PIRON, PIERRE DE MEYTS, HANS-GREGOR GATTNER, CORNELIA DIACONESCU, DEREK SAUNDERS, and DIETRICH BRANDENBURG. Impaired Negative Cooperativity of the Semisynthetic Analogues Human [Leu ^{B24}]- and [Leu ^{B25}]-Insulins	1229
JEAN HOUMARD and DIDIER BOGUSZ. Kinetic Study of the Expression of <i>Klebsiella pneumoniae</i> Nitrogen Fixation (<i>nif</i>) Genes under Conditions of Inhibited Transcription	1237
B. S. TUANA, A. DZURBA, V. PANAGIA, and N. S. DHALLA. Stimulation of Heart Sarcolemmal Calcium Pump by Calmodulin	1245
KATSUAKI SUGIOKA, HIROKO NAKANO, TOSHIKAZU NOGUCHI, JUN TSUCHIYA, and MINORU NAKANO. Decomposition of Unsaturated Phospholipid by Iron-ADP-Adriamycin Coordination Complex	1251
MICHIYA ITOH, HIROKO MIZUKOSHI, KIYOKAZU FUKU, SHIGERU MATSUKAWA, KAZUHIRO MAWATARI, YOSHIMASA YONEYAMA, MINORU SUMITANI, and KEITARO YOSHIHARA. Tryptophan Fluorescence of Human Hemoglobin. I. Significant Change of Fluorescence Intensity and Lifetimes in the T-R Transition	1259
JOHN R. MAHONEY and JOHN W. EATON. Chloroquine-Resistant Malaria: Association with Enhanced Plasmodial Protease Activity	1266
KEIKO MATSUZAKI and HIDEKAZU FUNABASHI. Isoaccepting tRNAs of Posterior Silk Gland of Mutant <i>Bombyx mori</i>	1272
T. E. VAN DYKE, M. J. LEVINE, L. A. TABAK, and R. J. GENCO. Reduced Chemotactic Peptide Binding in Juvenile Periodontitis: A Model for Neutrophil Function	1278
Th. VAN DER HOEVEN. Testosterone Oxidation by Rat Liver Microsomes: Effects of Phenobarbital Pretreatment and the Detection of Seven Metabolites by HPLC	1285
J. M. BECKERICH, M. LAMBERT, and H. HESLOT. Mutations Affecting Simultaneously the Lysine and Polyphosphates Pools in the Yeast <i>Saccharomyces lipolytica</i>	1292
J. C. MAZIERE, C. WOLF, C. MAZIERE, L. MORA, G. BEREZIAT, and J. POLONOVSKI. Inhibition of Human Fibroblast Sphingomyelinase by Cholesterol and 7-Dehydrocholesterol	1299
BETH E. NELSON, SUSAN J. GAN, and KENNETH G. STROTHKAMP. Terbium Ion Binding to <i>Limulus polyphemus</i> Hemocyanin	1305
VICTORIA D. SCARBOROUGH, HARVEY R. BRADFORD, and PANKAJ GANGULY. Aggregation of Platelets by Muscle Actin. A Multivalent Interaction Model of Platelet Aggregation by ADP	1314
MARION H. O'LEARY, WILLIAM J. DeGOOYER, THOMAS M. DOUGHERTY, and VERNON ANDERSON. 1-Hydroxycyclopropane Carboxylic Acid Phosphate: A Potent Inhibitor of Enzymes Metabolizing Phosphoenolpyruvate	1320
MATYAS SANDOR and JOHN J. LANGONE. Immune Aggregation and Not Antigen-Induced Conformational Change Accounts for Enhanced Reactivity between Immunoglobulin G and Protein A	1326

L. CASTILLO, Y. TANAKA, and H. F. DeLUCA. Parathyroid Hormone Is Not Involved in 1,25-Dihydroxyvitamin D Regulation of 25-Hydroxyvitamin D Metabolism <i>in Vivo</i>	1332
GEORGE T. CHANG, RONALD G. HARVEY, and SAMUEL B. WEISS. The Fate of SV40 DNA in Infected Cells after Treatment with Benzo(a)pyrene Diol Epoxide	1337
CONSTANTINOS J. LIMAS. Phosphorylation of Myocardial Nuclei Enhances Their Susceptibility to Deoxyribonuclease I	1347
LEIGH C. MURPHY and ROBERT L. SUTHERLAND. Modifications in the Aminoether Side Chain of Clomiphene Influence Affinity for a Specific Antiestrogen Binding Site in MCF 7 Cell Cytosol	1353
INGEGERD KALLES and KJELL WIKVALL. Role of Sulfhydryl Groups in Catalytic Activity of Purified Cholesterol 7 α -Hydroxylase System from Rabbit and Rat Liver Microsomes	1361
YASUO KAGAWA and NORIKO NUKIWA. Conversion of Stable ATPase to Labile ATPase by Acetylation, and the $\alpha\beta$ - and $\alpha\gamma$ Subunit Complexes during Its Reconstitution	1370
DENNIS A. CARSON and KWANG-POO CHANG. Phosphorylation and Anti-leishmanial Activity of Formycin B	1377
DEBABRATA BANERJEE, MITALI BASU, ILA CHOUDHURY, and GORA CHAND CHATTERJEE. Cell Surface Carbohydrates of <i>Agrobacterium tumefaciens</i> Involved in Adherence during Crown Gall Tumor Initiation	1384
C. CHANNA REDDY and GORDON A. HAMILTON. Activation of Homogeneous Preparations of Hog Kidney <i>myo</i> -Inositol Oxygenase by Quinolinic Acid and Ferrous Ions	1389
HIROKAZU YAMAMOTO, KUNIMOTO HOTTA, YOSHIRO OKAMI, and HAMAO UMEZAWA. Ribosomal Resistance of an Istamycin Producer, <i>Streptomyces tenjimariensis</i> , to Aminoglycoside Antibiotics	1396
JIMMY BARRANCO, ALBERTO DARSZON, and A. GOMEZ-PUYOU. Extraction of Mitochondrial Protein-Lipid Complexes into Organic Solvents: Inhibition of Cytochrome Oxidase Electron Transport by Dicyclohexylcarbodiimide and Triphenyltin Chloride	1402
JURG TSCHOPP and ECKHARD R. PODACK. Membranolysis by the Ninth Component of Human Complement	1409
WILLIAM E. SCHREIBER, REX GENTRY, and EDMOND H. FISCHER. Calmodulin and Cyclic Nucleotide Phosphodiesterase Activities in Erythrocytes from Normal and Schizophrenic Subjects	1415
ERRATUM. Volume 99, Number 2, March 31, 1981: Ralf Morgenstern, Joseph W. DePierre, Christina Lind, Claes Guthenberg, Bengt Mannervik, and Lars Ernster, "Benzo(α)pyrene Quinones Can Be Generated by Lipid Peroxidation and Are Conjugated with Glutathione by Glutathione S-Transferase B from Rat Liver," pp. 682-690	1422

Volume 100, Number 4, June 30, 1981

AUTHOR INDEX, Volume 100, Number 4, June 30, 1981	ii
NOTICE	iii
DARIO C. SABULARSE and RICHARD L. ANDERSON. Inorganic Pyrophosphate: D-Fructose-6-phosphate 1-Phosphotransferase in Mung Beans and Its Activation by D-Fructose 1,6-Bisphosphate and D-Glucose 1,6-Bisphosphate	1423
PETER M. STEWART and MACKENZIE WALSER. Low Dose Ethanol Prevents Propionate-Induced Hyperammonemia	1430
ELIZABETH F. MCCORD and STEVEN G. BOXER. Ultraviolet Excimer Laser Chemically Induced Dynamic Nuclear Polarization of Amino Acids at 360 MHz	1436
M. W. KENDALL-TOBIAS and A. R. CROFTS. Primary and Secondary Electron Transfer in Hexane-Solubilized Proteolipid Complexes of <i>Rhodospseudomonas sphaeroides</i> R-26	1444
W. D. GATHMANN and DAVID AMINOFF. Periodate Oxidation Studies in the Elucidation of the Structures of Sialic Acid Containing Oligosaccharides	1453
JOSE A. L. ARRUDA, HARRY LUBANSKY, SANDRA SABATINI, GEORGE DYTOKO, and C. TYLER BURT. Intracellular Phosphate Pools Show Compartmentalization of Intracellular pH in Turtle Urinary Bladder	1459
IRA L. GOLDKNOPE, SHEILA CHENG, MICHAEL W. ANDERSEN, and HARRIS BUSCH. Loss of Endogenous Nuclear Protein A24 Lyase Activity during Chicken Erythropoiesis	1464
TAI C. CHEN and JULES B. PUSCHETT. Evidence for an Endogenous Parathyroid Hormone-Sensitive Adenylate Cyclase Activator	1471
MICHEL MAUGRAS, DANIEL OTH, PIERRE BISCHOFF, PATRICE RUBINI, SERGE POIGNANT, and JITENDRA MEHRISHI. Covalent and Noncovalent Binding of Nitrobenzene Sulphonates to Cell Surface Membranes	1477
AYA JAKOBOVITS, YUVAL ESHDAT, and NATHAN SHARON. Plucking of Lectin Receptors from Erythrocytes: Isolation of Cell Surface Components without the Use of Detergents	1484
GENEVIEVE LERAY, LUCIENNE GUENET, ANDRE LE TREUT, and JEAN-YVES LE GALL. Age-Related Decrease in Lysosomal β -D-Galactosidase Activity of Human Liver Cell Lines: Argument against Post-translational Modifications	1491
M. C. CORCHUELO, A. HERZOG, L. DESMAREZ, R. LAVALLE, and A. BOLLEN. Resistance to the Peptide-like Antibiotic Negamycin in <i>Escherichia coli</i>	1497
M. C. BERTHE, C. CHARPENTIER, J. LEMATRE, and R. BONALY. Glucosamine and Chitin Accumulation in Cell Walls of the Yeast <i>Rhodotorula glutinis</i> CBS 3044. Influence of Culture Conditions	1504
JORMA KESKI-OJA, ERKKI RUOSLAHTI, and EVA ENGVALL. Binding of Fibronectin to Actin Is Inhibited by Gelatin	1515
H. M. SCHULMAN, A. WILCZYNSKA, and P. PONKA. Transferrin and Iron Uptake by Human Lymphoblastoid and K-562 Cells	1523
HENRYK STEPIEN, EWA KARASEK, and MAREK PAWLIKOWSKI. Effects of Adrenalectomy and Hydrocortisone on DNA Synthesis in the Rat Anterior Pituitary Gland	1531
CATHERINE RICE-EVANS and PAUL HOCHSTEIN. Alterations in Erythrocyte Membrane Fluidity by Phenylhydrazine-Induced Peroxidation of Lipids	1537
P. A. WALSH and JOSEPH KATZ. Glucokinase in Bird Liver: A Membrane-Bound Enzyme	1543

MARGO PANUSH COHEN and VAN YU-WU. Identification of Specific Amino Acids in Diabetic Glomerular Basement Collagen Subject to Nonenzymatic Glucosylation <i>in Vivo</i>	1549
DOROTHY A. SCHAFER and DONALD E. HULTQUIST. Isolation of an Acid Protease from Rabbit Reticulocytes and Evidence for Its Role in Processing Redox Proteins during Erythroid Maturation	1555
JIANN-WU WEI and ROBERT A. HICKIE. Increased Content of Calmodulin in Morris Hepatoma 5123 t.c. (h).....	1562
NICHOLAS E. GEACINTOV, HIROKO YOSHIDA, VICTOR IBANEZ, and RONALD G. HARVEY. Noncovalent Intercalative Binding of 7,8-Dihydroxy-9,10-epoxybenzo(a)pyrene to DNA	1569
SEN-ITIROH HAKOMORI, EDWARD NUDELMAN, STEVEN LEVERY, DAVOR SOLTER, and BARBARA B. KNOWLES. The Hapten Structure of a Developmentally Regulated Glycolipid Antigen (SSEA-1) Isolated from Human Erythrocytes and Adenocarcinoma: A Preliminary Note	1578
J. LAKSHMANAN, H. MANSFIELD, M. E. WEICHSEL, JR., S. HOATH, S. SCOTT, P. SHAPSHAK, and D. A. FISHER. Neonatal Hypothyroidism—A Biochemical Disorder of α -Tubulin Metabolism	1587
M. LYNN PRITCHARD, JAMES E. SEELY, HANNU POSO, LEONARD S. JEFFERSON, and ANTHONY E. PEGG. Binding of Radioactive α -Difluoromethylornithine to Rat Liver Ornithine Decarboxylase	1597
ANIL G. PALEKAR, PLATON J. COLLIPP, and VADDANAHALLY T. MADDIAH. Growth Hormone and Rat Liver Mitochondria Effects on Urea Cycle Enzymes	1604
PHILIP H. JOHNSON, ALAN D. YATES, and WINIFRED M. WATKINS. Human Salivary Fucosyltransferases: Evidence for Two Distinct α -3-L-Fucosyltransferase Activities One of which Is Associated with the Lewis Blood Group <i>Le</i> Gene	1611
DANIEL S. STRAUS, DONALD L. COPPOCK, and KENNETH J. PANG. Low Molecular Weight Mitogenic Factor Produced by BRL-3A Cultured Rat Liver Cells	1619
KAZUTOSHI SUZUKI, MICHIKO MIYAKI, MAKOTO UMEDA, MASARU NISHIMURA, and TETSUO ONO. Differential Inactivation of DNA Polymerases α and β by Aldehyde Compounds.....	1626
LEO R. SCHLEICHER, III, and KOSTIA BERGMAN. The Amino Acid Composition of <i>Rhizobium meliloti</i> Flagellin: Occurrence of a Single Tryptophan Residue	1634
GRACE G. DEANIN, SUSAN F. PRESTON, and MALCOLM W. GORDON. Carboxyl Terminal Tyrosine Metabolism of α Tubulin and Changes in Cell Shape: Chinese Hamster Ovary Cells ..	1642
ROBERT L. WYKLE, CRAIG H. MILLER, JON C. LEWIS, JEFFREY D. SCHMITT, JENNIE A. SMITH, JEFFERSON R. SURLES, CLAUDE PIAANTADOSI, and JOSEPH T. O'FLAHERTY. Stereospecific Activity of 1-O-Alkyl-2-O-acetyl-sn-glycero-3-phosphocholine and Comparison of Analogs in the Degranulation of Platelets and Neutrophils	1651
P. KAY LUND, RICHARD H. GOODMAN, and JOEL F. HABENER. Intestinal Glucagon mRNA Identified by Hybridization to a Cloned Islet cDNA Encoding a Precursor.....	1659
SIMEON POLLACK and THERESA CAMPANA. Immature Red Cells Have Ferritin Receptors ..	1667
CAROLYN SUE RICHARDS, EISUKE FURUYA, and KOSAKU UYEDA. Regulation of Fructose 2,6-P ₂ Concentration in Isolated Hepatocytes.....	1673
VALENTIN M. STEPANOV, GALINA G. CHESTUKHINA, GALINA N. RUDENSKAYA, ASMIK S. EPREMYAN, ANDREI L. OSTERMAN, OLGA M. KHODOVA, and LIDIYA P. BELYANOVA. A New Subfamily of Microbial Serine Proteinases? Structural Similarities of <i>Bacillus thuringiensis</i> and <i>Thermoactinomyces vulgaris</i> Extracellular Serine Proteinases	1680
LEE-YOUNG CHAU and HSIN-HSIUNG TAI. Release of Arachidonate from Diglyceride in Human Platelets Requires the Sequential Action of a Diglyceride Lipase and a Monoglyceride Lipase.....	1688
R. S. QUINN and G. A. RODAN. Enhancement of Ornithine Decarboxylase and Na ⁺ , K ⁺ ATPase in Osteoblastoma Cells by Intermittent Compression	1696
MARY A. NAPIER, IRVING H. GOLDBERG, OTTO D. HENSENS, RAY S. DEWEY, JERROLD M. LIESCH, and GEORG ALBERS-SCHONBERG. Neocarzinostatin Chromophore: Presence of a Cyclic Carbonate Subunit and Its Modification in the Structure of Other Biologically Active Forms.....	1703
J. WESLEY PIKE. Evidence for a Reactive Sulfhydryl in the DNA Binding Domain of the 1,25-Dihydroxyvitamin D ₃ Receptor	1713
P. FONLUPT, C. REY, and H. PACHECO. Phosphatidylethanolamine Methylation in Membranes from Rat Cerebral Cortex: Effect of Exogenous Phospholipids and S-Adenosylhomocysteine ..	1720
JOSETTE GUILLEMANT and SERGE GUILLEMANT. Effect of 17 β -Estradiol and Testosterone on Guanosine 3',5'-Cyclic Monophosphate in the Rat Adrenal Cortex	1727
SISSSEL LUND-KATZ and MICHAEL C. PHILLIPS. Location and Motion of Free Cholesterol Molecules in High-Density Lipoprotein.....	1735
ERRATUM. Volume 99, Number 4, April 30, 1981: E. Krystek and H. W. Hofer, "Interaction of a Phosphorylated Site of Muscle Phosphofructokinase with the Activation of the Enzyme by NH ₄ ⁺ and K ⁺ ," pp. 1138-1145	1743

The Subject Index for Volume 100 will appear in the December 31, 1981 issue as part of a cumulative index for 1981.